

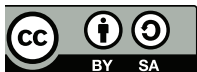
Eureka Math *A Story of Units*

Fourth Grade – Module 2

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Materials based on Eureka Math Version 3.



Module Assessment Overview

Purpose of Assessments

Mid-Module Assessment: These tasks address approximately the **first half** of the module's learning objectives, and provide important information for instruction and for grading.

End-of-Module Assessment: These tasks are based on all standards addressed in order to gauge students' full range of understanding of the **module as a whole**. The End-of-Module assessment should carry more weight than the Mid-Module Assessment in terms of student grades in the appropriate domain.

Administration of Assessments

- Mid- and End-of-Module Assessments are designed to be completed in approximately one class period. However, The tests can be given over multiple days as needed.
- Assessments are designed to be completed independently by students, without assistance.
- These tasks should not be preceded by review of similar problems.

Grading Guidance

The grading scale on Elementary Report Cards has been changed for 2015-2016 and beyond. Please note that **4 now indicates advanced understanding of grade level standards expected at this time of year.**

- 4 – Advanced:** Student demonstrates advanced understanding of grade level standards expected at this time of year.
- 3 – Proficient:** Student demonstrates proficiency with grade level standards expected at this time of year.
- 2 – Basic:** Student demonstrates basic understanding of grade level standards expected at this time of year. Student needs additional support and practice.
- 1 – Below Basic:** Student demonstrates minimal understanding of grade level standards expected at this time of year. Student needs significant support and practice.

Rubrics have been updated to reflect this change. Rubrics have been further modified from Eureka Math originals for clarity, accuracy, and alignment to Bethel's grade scale.

General Grading Guidance:

- On the report card, student learning is reported by CCSS domain. The Fourth Grade CCSS domains are: Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations – Fractions, Measurement and Data, and Geometry.
- Grades in each domain should be based on multiple sources of evidence, including the Mid- and End-of-Module Assessments. The End-of-Module assessment should carry more weight than the Mid-Module Assessment in terms of student grades in the appropriate domain.

Module 2 Grading Guidance:

- *For standard 4.MD.1 in Module 2, the following measurement units will be taught and assessed: km, m, and cm; kg and g; L and mL.* The remaining measurement units (pounds, ounces, and time) will be assessed in Module 7. See checklist on page 3.
- *For standard 4.MD.2 in Module 2, solving problems involving distances, volume, and mass using whole numbers will be taught and assessed.* Solving problems involving time, money, and numbers as fractions or decimals will be assessed in Module 7. See checklist on page 3.

Updates

Grade 4 Common Core State Standards Checklist by Module

This grade-level chart provides an at-a-glance view of when each standard is addressed. **Shaded boxes indicate standards first assessed in Module 2.** Note that standards included in major clusters are followed by an asterisk (*). Please refer to the Curriculum Overview of *A Story of Units* for a curriculum map and detailed grade-level descriptions including a summary of the year, a rationale of the module sequence, and a standards alignment chart.

CCSS		GRADE 4 MODULES						
		1	2	3	4	5	6	7
4.OA	1*			X				X
	2*			X				X
	3*	X		X				X
	4			X				
	5					X		
4.NBT	1*	X						
	2*	X						
	3*	X						
	4*	X						
	5*			X				X
	6*			X				
4.NF	1*					X		
	2*					X		
	3a*					X		
	3b*					X		
	3c*					X		
	3d*					X		
	4a*					X		
	4b*					X		
	4c*					X		
	5*						X	
	6*						X	
	7*						X	
4.MD	1		X					X
	2		X			X	X	X
	3			X				
	4					X		
	5a				X			
	5b				X			
	6				X			
	7				X			
4.G	1				X			
	2				X			
	3				X			

Grade 4 Module 2 End-of-Module Assessment Task Score Sheet**A Progression of Learning**

A Progression of Learning is provided to describe steps that illuminate the gradually increasing understandings that students develop *on their way to proficiency*. In this chart, this progress is presented from left to right. The learning goal for each student is to move to the last step, “Evidence of solid reasoning with a correct answer”. These steps are meant to help teachers and students identify and celebrate what the student **CAN** do now, and what they need to work on next.

Score Key: A Progression of Learning

Little or no evidence of reasoning with an incorrect answer. (1 Point)	Evidence of some reasoning with an incorrect answer. (2 Points)	Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer. (3 Points)	Evidence of solid reasoning with a correct answer. (4 Points)
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Module 2: End-of-Module Assessment			
Question	Domain	Standards	
	Measurement and Data	4.MD.1	4.MD.2
1	1 2 3 4	X	
2	1 2 3 4	X	
3	1 2 3 4	X	X
4	1 2 3 4	X	X

Note: For more information about standards assessed in this module, see back of this score sheet.

Domain Score	Number and Operations in Base-Ten	
Total Points		
Level	4	14-16 points
	3	10-13 points
	2	6-9 points
	1	4-5 points

Notes:

Grade 4 Module 2 End-of-Module Assessment Task Score Sheet (continued)

End-of-Module Assessment Task (Topics A–B) Clusters and Standards Addressed

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

- 4.MD.1¹** Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...*
- 4.MD.2²** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

¹ Pounds, ounces, and time will be assessed in Module 7.

² Time, money, and numbers as fractions or decimals will be assessed in Module 7.



Grade 4 Module 2 End-of-Module Assessment Task Rubric

A Progression of Learning				
Assessment Task Item	STEP 1 Little or no evidence of reasoning with an incorrect answer. (1 Point)	STEP 2 Evidence of some reasoning with an incorrect answer. (2 Points)	STEP 3 Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer. (3 Points)	STEP 4 Evidence of solid reasoning with a correct answer. (4 Points)
1 4.MD.1	The student correctly identifies 0-3 of the twelve conversions.	The student correctly identifies 4-7 of the twelve conversions.	The student correctly identifies 8-10 of the twelve conversions.	The student correctly answers 11-12 of the twelve conversions. (See below.)
	Length: (1) 3,000 m (2) 9,000 m (3) 6,435 m (4) 12,012 m Mass: (5) 3,000 g (6) 20,300 g (7) 1,074 g (8) 403,004 g Capacity: (9) 4,000 mL (10) 48,808 mL (11) 2,020 mL (12) 639,006 mL			
2 4.MD.1	The student correctly answers 0-1 of the three parts.	The student correctly answers 2 of the three parts.	The student correctly answers all 3 parts, but reasoning is unclear.	The student correctly answers 3 of the three parts. (See below.)
	a. (1) Correct, because 1,000 m equals 1 km b. (2) Correct, because 1,000 mL equals 1 L c. (3) Incorrect because 1,000 g equals 1 kg, so 38 kg should equal 38,000 g.			
3 4.MD.1 4.MD.2	The student incorrectly answers all parts.	The student correctly answers 1 of the three parts.	The student correctly answers 2 of the three parts.	The student correctly answers 3 of the three parts. (See below.)
	▪ (1) 510 km 100 m ▪ (2) 1, 949 g ▪ (3) 103,098 mL Note: Students are not expected to covert from g to kg or from mL to L.			
4 4.MD.1 4.MD.2	The student correctly answers 0-2 of the seven parts.	The student correctly answers 3-4 of the seven parts.	The student correctly answers 5-6 of the seven parts.	The student correctly answers 7 of the seven parts. (See below.)
	a. (1) 11,000 m (2) correct work shown b. (3) 1,500 mL (4) correct work shown c. (5) 68,000 g (6) correct work shown (7) Explains thinking			

Grade 4 Module 2 End-of-Module Assessment Task Key

Name Jack

Date _____

1. Complete the following conversion charts:

Length	
3 km	<u>3,000</u> m
9 km	<u>9,000</u> m
6 km 435 m	<u>6,435</u> m
12 km 12 m	<u>12,012</u> m

Mass	
3 kg	<u>3,000</u> g
20 kg 300 g	<u>20,300</u> g
1 kg 74 g	<u>1,074</u> g
403 kg 4 g	<u>403,004</u> g

Capacity	
4 L	<u>4,000</u> mL
48 L 808 mL	<u>48,808</u> mL
2 L 20 mL	<u>2,020</u> mL
639 L 6 mL	<u>639,006</u> mL

2. A student completed the problem below. Check his work. Explain how you know if each solution is correct or incorrect.

Convert the following measurements:

~~a.~~ 24 km = 24,000 m

~~b.~~ 16 L = 16,000 mL

c. 38 kg = 3,800 g

$$1 \text{ km} = 1,000 \text{ m}$$

$$24 \text{ km} = 24,000 \text{ m}$$

$$1 \text{ L} = 1,000 \text{ mL}$$

$$16 \text{ L} = 16,000 \text{ mL}$$

$$1 \text{ kg} = 1,000 \text{ g}$$

$$38 \text{ kg} = 38,000 \text{ g}$$

Problems a and b are correct because there are 1,000 meters, mL, or grams in 1 km, L, or kg.

Problem c is wrong. 38 kg is really 38,000 g.

3. Find the sum or difference.

a. $493 \text{ km } 43 \text{ m} + 17 \text{ km } 57 \text{ m}$

$$\begin{array}{r} 493 \text{ km } 43 \text{ m} \\ + 17 \text{ km } 57 \text{ m} \\ \hline 510 \text{ km } 100 \text{ m} \end{array}$$

b. $25 \text{ kg } 32 \text{ g} - 23 \text{ kg } 83 \text{ g}$

$$\begin{array}{r} 25 \text{ kg } 32 \text{ g} \\ - 23 \text{ kg } 83 \text{ g} \\ \hline 1 \text{ kg } 49 \text{ g} \end{array}$$

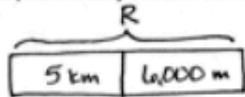
c. $100 \text{ L } 99 \text{ mL} + 2,999 \text{ mL}$

$$\begin{array}{r} 100 \text{ L } 99 \text{ mL} \\ + 2,999 \text{ mL} \\ \hline 103 \text{ L } 98 \text{ mL} \end{array}$$

Grade 4 Module 2 End-of-Module Assessment Task Key (continued)

4. Billy is training for a half-marathon. For the problems below, use tape diagrams, numbers, and words to explain each answer.

- a. Each day Billy runs on the treadmill for 5 kilometers and runs on the outdoor track for 6,000 meters. In all, how many meters does Billy run each day?



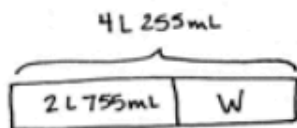
$$5 \text{ km} = 5,000 \text{ m}$$

$$5,000 \text{ m} + 6,000 \text{ m} = 11,000 \text{ m}$$

$$R = 11,000 \text{ m}$$

Billy runs 11,000 meters each day.

- b. Since Billy has started training, he has also been drinking more water. On Saturday, he drank 2 liters 755 milliliters of water. On Sunday, he drank some more. If Billy drank a total of 4 liters 255 milliliters of water on Saturday and Sunday, how many milliliters of water did Billy drink on Sunday?



$$4 \text{ L } 255 \text{ mL} = 4,255 \text{ mL}$$

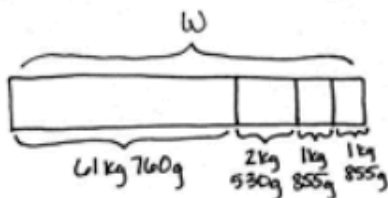
$$2 \text{ L } 755 \text{ mL} = 2,755 \text{ mL}$$

$$\begin{array}{r} 3 \text{ } 12 \\ 4,255 \\ - 2,755 \\ \hline 1,500 \end{array}$$

$$W = 1,500 \text{ mL}$$

Billy drank 1,500 mL of water on Sunday.

- c. Since exercising so much for his half-marathon, Billy has been losing weight. In his first week of training, he lost 2 kilograms 530 grams. In the following two weeks of training, he lost 1 kilogram 855 grams each week. Billy now weighs 61 kilograms 760 grams. What was Billy's weight, in grams, before he started training? Explain your thinking.



$$2,530 \text{ g}$$

$$1,855 \text{ g}$$

$$+ 1,855 \text{ g}$$

$$\hline 6,240 \text{ g}$$

$$61,760 \text{ g}$$

$$+ 6,240 \text{ g}$$

$$\hline 68,000 \text{ g}$$

$$W = 68,000 \text{ g}$$

Billy's weight before training was 68,000 grams.

If he lost his weight, he had to weigh more before, so I added all the weight he lost to how much he weighs now for my answer.